

REMARKS

Reconsideration of the application is requested in view of the above amendments and the following remarks. Claims 1-15 were amended in order to provide antecedent bases where missing. In addition, the transition "characterized in that" has been replaced with the preferred transition, "wherein." Finally, the dependencies of claims 8-15 were amended to correct an error made in the preliminary amendment. No new matter has been added as a result of these amendments.

Rejection under 35 U.S.C. § 103

Claims 1-15 were rejected under 35 U.S.C. § 112 as indefinite. An antecedent basis was lacking for a number of terms. The claims have been amended to provide an antecedent basis where necessary. Accordingly, this objection has been rendered moot.

In addition, the Examiner argued that "determining" in claim 1, line 11 should be deleted. The Applicant respectfully traverses this rejection. The Applicant believes this term is necessary to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Rejection under 35 U.S.C. § 103

Claims 1-15 were rejected under 35 U.S.C. § 103 as obvious over Webber et al. (WO 98/18001) in view of Uto et al. (U.S. Pat. No. 5,886,625). The Applicant respectfully traverses this rejection. The current invention is based on the fact that "an explosive atmosphere consisting of a mixture of air, under atmospheric conditions, with flammable substances in the form of gases...will always undergo a spontaneous ignition." (p. 6, l. 31 - p. 7, l. 5). To prevent this spontaneous ignition, the process disclosed under claim 1 requires the measurement of the time elapsed since creation of an atmosphere and the atmosphere's change of state over time. Based upon these measurements, the induction period remaining before a risk of spontaneous ignition is determined.

The process taught by Webber (WO 98/18001), however, does not recognize that the spontaneous ignition of the atmosphere is an inevitability. As a result, the process taught by

Webber requires the *input of energy* to determine when the state of the atmosphere presents a risk of combustion. Thus, since the process disclosed by Webber relies upon the analysis of the atmosphere before and after an ignition source is provided to the atmosphere, the process taught by Webber is not analyzing the *spontaneous* ignition of the atmosphere. Webber teaches the use of an ignition means to cause the combustion of the sample atmosphere containing a first and second component, wherein the concentration of the critical first component is measured both before and after the ignition. Based upon this ignition data, the process allows determination of when the mixture presents a risk of combustion.

As exemplified by claim 1, no such ignition means is required under the current invention. The change in the state of the atmosphere and changes in temperature provide the parameters necessary for determining when there is a risk of spontaneous ignition under the process of claim 1, not an ignition means which introduces external energy to the atmosphere. The process disclosed in claim 1 analyzes the *spontaneous* ignition of an atmosphere, not the ignition of an atmosphere upon the introduction of external energy. Accordingly, Webber fails to teach, or even suggest, the method of claim 1.

Claim 7 also analyzes the atmosphere without employing an ignition means. The process disclosed in claim 7 is based upon the fact that an explosive atmosphere will always undergo a spontaneous ignition. No ignition means is used to determine the remaining induction time under the process of claim 7. Since claim 7 provides for the analysis of the *spontaneous* ignition of the atmosphere, Webber also fails to render claim 7 obvious.

Uto et al. teaches the determination of a residual fuel amount remaining in a gas tank. Uto sought to allow the accurate determination of the amount of residual fuel in a tank that is tilted. Thus, Uto is not in the same field of endeavor, nor is it reasonably pertinent to the particular problem which the current invention aims to resolve. Accordingly, Uto et al. does not provide a proper basis for an obviousness rejection of the current invention.

Nonetheless, Uto et al. fails to teach, or even suggest, the analysis of the spontaneous ignition of an explosive atmosphere. Nowhere does Uto teach that the critical point can be determined without using an ignition means. Accordingly, Uto fails to provide any motivation to

modify the teachings of Webber. Thus, Webber in view of Uto fails to render claims 1 and 7 obvious.

The remaining claims all depend from claims 1 and 7. For at least the reason that these claims depend upon allowable base claims, the Applicant respectfully contends they are also in condition for an allowance.

In view of the above, Applicant respectfully requests reconsideration of the application in the form of a Notice of Allowance.

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Respectfully submitted,

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